

In the Claims:

1. (Original) A semiconductor wafer having an asymmetric edge profile (EP) extending between an inner edge profile (EP_{in}) and an outer edge profile (EP_{out}) as illustrated by FIG. 1, which is incorporated herein;

wherein t is a thickness of the semiconductor wafer, ϕ_1 is an angle in a range between about 30° and about 85°, R is a radius of an arc that defines EP_{in} at a point of intersection with a top surface of the semiconductor wafer, and α is an acute angle that represents an angle of intersection between a bottom surface of the semiconductor wafer and a line that is tangent to the arc at a point on EP_{out}; and

10 wherein:

$$A_1 = R(1 - \cos\phi_1);$$

$$A_2 = R(1 - \sin\alpha) + (t - R\sin\phi_1 - R\cos\alpha)\cot\alpha;$$

$$B_1 = R\sin\phi_1; \text{ and}$$

$$B_2 = t - R\sin\phi_1.$$

2. (Original) The wafer of Claim 1, wherein R is in a range between about 0.23t and about 0.5t.

3. (Original) The wafer of Claim 2, wherein A_2 is greater than about two times A_1 .

4. (Original) The wafer of Claim 2, wherein ϕ_1 is in a range between about 60° and about 75°.

5. (Original) The wafer of Claim 2, wherein t is in a range between about 625 μm and about 825 μm .

Claims 6-18 (Canceled).

19. (Original) A semiconductor wafer having an asymmetric edge profile (EP2) extending between an inner edge profile (EP2_{in}) and an outer edge profile (EP2_{out}) as illustrated by FIG. 2, which is incorporated herein;

wherein t is a thickness of the semiconductor wafer, ϕ_1 is an angle in a range between about 30° and about 85° , ϕ_2 is greater than ϕ_1 and less than about 85° , R is a radius of an arc that defines EP2_{in} at a point of intersection with a top surface of the semiconductor wafer, and α is an acute angle that represents an angle of intersection between a bottom surface of the semiconductor wafer and a line that is tangent to the arc at a point on EP2_{out}; and

wherein:

$$A_1 = R(1 - \cos\phi_1);$$

$$A_2 = R(1 - \sin\alpha) + (B_2 - R\cos\alpha)\cot\alpha;$$

$$B_1 = R\sin\phi_1; \text{ and}$$

$$B_2 = t - R\sin\phi_1.$$

Claim 20 (Canceled).